METHOD AND APPARATUS FOR TIME SYNCHRONIZATION IN A DATA COMMUNICATION SYSTEM

ABSTRACT OF THE DISCLOSURE

A common clock shared by two or more nodes within a network used for time-synchronization. The nodes communicate via a packetized data transmission. Each data packet has a header with a value. The clock includes a first timing portion that includes at least two data packets where the value is constant for each data packet, and a second timing portion that includes at least two data packets where the value is constant for each data packet but different from the value of the data packets in the first timing portion. Alternatively, the clock includes a first timing portion that includes at least two data packets where the value changes with each data packet, and one or more subsequent timing portions each including at least two data packets where the value is constant for each data packet within a subsequent timing portion but changes with each of the subsequent timing portions.